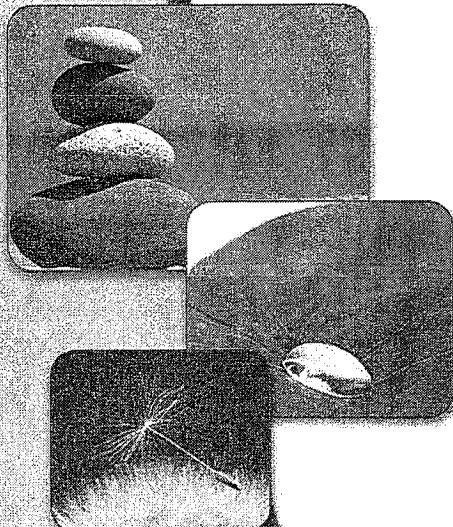


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Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all 2003 NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Page 1 of 37

05/26/2011

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Westfield
Westfield Executive Park
53 Southampton Road
Westfield, MA 01085
Tel: (413)572-4000

CHECKED FOR COMPLETENESS
OF PARAMETERS ORDERED BY:

Joe Chimi
6/13/11

TestAmerica Job ID: 360-33835-1

Client Project/Site: Olin Chemical Surfacewater Quarterly

For:

Olin Corporation
PO BOX 248
Charleston, Tennessee 37310-0248

Attn: Mr. James Cashwell

Joseph L. Chimi

Authorized for release by:

05/26/2011 03:05:27 PM

Joe Chimi
Report Production Representative
joe.chimi@testamericainc.com

Designee for

Becky Mason
Project Manager II
becky.mason@testamericainc.com

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Case Narrative

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Job ID: 360-33835-1

Laboratory: TestAmerica Westfield

Narrative

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 05/16/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 C of the required temperature or method specified range. For samples with a specified temperature of 4 C, samples with a temperature ranging from just above freezing temperature of water to 6 C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for dissolved metals in accordance with EPA SW-846 Method 6010B. The samples were analyzed on 05/17/2011.

Sodium was detected in method blank MB 360-73721/18 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

At the request of the client, an abbreviated/modified MCP analyte list was reported for this job.

No difficulties were encountered during the dissolved metals analyses.

All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared and analyzed on 05/18/2011.

Sodium was detected in method blank MB 360-73734/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

At the request of the client, an abbreviated/modified MCP analyte list was reported for this job.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

ANIONS

TestAmerica Westfield

Case Narrative

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Job ID: 360-33835-1 (Continued)

Laboratory: TestAmerica Westfield (Continued)

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 05/17/2011.

Chloride and Sulfate failed the recovery criteria low for the MSD of sample OC-SW-PZ-18RSW (360-33835-6) in batch 360-73745 and exceeded the rpd limit. The associated LCS recovered within control limits. Refer to the QC report for details.

Samples OC-SW-ISCO1 (360-33835-1)[10X], OC-SW-ISCO2 (360-33835-2)[10X], OC-SW-ISCO3 (360-33835-3)[10X], OC-SW-PZ-16RRSW (360-33835-4)[10X], OC-SW-PZ-17RRSW (360-33835-5)[10X], OC-SW-PZ-18RSW (360-33835-6)[10X], OC-SW-SD-17 (360-33835-7)[10X] and OC-DUP (360-33835-8)[10X] required dilution prior to analysis due to high target concentration. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the anions analyses.

All other quality control parameters were within the acceptance limits.

ANIONS

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 05/17/2011.

Nitrate as N and Nitrite as N exceeded the rpd limit for the MSD of sample OC-SW-PZ-18RSW (360-33835-6) in batch 360-73752. The associated LCS recovered within control limits. Refer to the QC report for details.

No other difficulties were encountered during the anions analyses.

All other quality control parameters were within the acceptance limits.

AMMONIA

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for ammonia in accordance with Lachat 107-06-1B. The samples were prepared on 05/18/2011 and 05/20/2011 and analyzed on 05/18/2011 and 05/25/2011.

Ammonia failed the recovery criteria low for the MS and MSD of sample OC-SW-PZ-18RSW (360-33835-6) in batch 360-74241. The associated LCS recovered within control limits. Refer to the QC report for details.

Samples OC-SW-ISCO2 (360-33835-2)[5X], OC-SW-PZ-16RRSW (360-33835-4)[5X], OC-SW-PZ-17RRSW (360-33835-5)[5X] and OC-SW-SD-17 (360-33835-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the ammonia analyses.

All other quality control parameters were within the acceptance limits.

SPECIFIC CONDUCTIVITY

Samples OC-SW-ISCO1 (360-33835-1), OC-SW-ISCO2 (360-33835-2), OC-SW-ISCO3 (360-33835-3), OC-SW-PZ-16RRSW (360-33835-4), OC-SW-PZ-17RRSW (360-33835-5), OC-SW-PZ-18RSW (360-33835-6), OC-SW-SD-17 (360-33835-7) and OC-DUP (360-33835-8) were analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 05/19/2011 and 05/26/2011.

No difficulties were encountered during the conductivity analyses.

All quality control parameters were within the acceptance limits.

MassDEP Analytical Protocol Certification Form

Laboratory Name:	TestAmerica Westfield		Project #:	360-33835-1		
Project Location:	RTN:					
This form provides certifications for the following data set: list Laboratory Sample ID Number(s):						
360-33835-(1-8)						
Matrices: <input checked="" type="checkbox"/> Groundwater/Surface Water <input type="checkbox"/> Soil/Sediment <input type="checkbox"/> Drinking Water <input type="checkbox"/> Air <input type="checkbox"/> Other:						
CAM Protocols (check all that apply below):						
8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	Mass DEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	Mass DEP APH CAM IX A <input type="checkbox"/>	
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	Mass DEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>	
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	332.0 Perchlorate CAM VIII B <input type="checkbox"/>		
Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status						
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Responses to Questions G, H and I below are required for "Presumptive Certainty" status						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹	
<i>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350</i>						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
¹ All negative responses must be addressed in an attached laboratory narrative.						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.</i>						
Signature:				Position:	Laboratory Director	
Printed Name:	Steven C. Hartmann			Date:	5/26/11 14:43	
This form has been electronically signed and approved						

Detection Summary

Client: Olin Corporation

TestAmerica Job ID: 360-33835-1

Project/Site: Olin Chemical Surfacewater Quarterly

Client Sample ID: OC-SW-ISCO1

Lab Sample ID: 360-33835-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	74	J	100	12	ug/L	1	6010B		Dissolved
Chromium	5.8		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	74000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	180		100	12	ug/L	1	6010B		Total/NA
Chromium	12		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	63000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.14		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	89		2.0	2.0	mg/L	1	300.0		Total/NA
Chloride	110		10	10	mg/L	10	300.0		Total/NA
Ammonia	18		0.10	0.10	mg/L	1	L107-06-1B		Total/NA
Specific Conductance	630		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-ISCO2

Lab Sample ID: 360-33835-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	150		100	12	ug/L	1	6010B		Dissolved
Chromium	16		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	66000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	600		100	12	ug/L	1	6010B		Total/NA
Chromium	65		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	56000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.57		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	190		20	20	mg/L	10	300.0		Total/NA
Chloride	70		10	10	mg/L	10	300.0		Total/NA
Ammonia	28		0.50	0.50	mg/L	5	L107-06-1B		Total/NA
Specific Conductance	740		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-ISCO3

Lab Sample ID: 360-33835-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	39	J	100	12	ug/L	1	6010B		Dissolved
Sodium	100000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	180		100	12	ug/L	1	6010B		Total/NA
Sodium	87000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	1.1		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	99		2.0	2.0	mg/L	1	300.0		Total/NA
Chloride	190		10	10	mg/L	10	300.0		Total/NA
Ammonia	8.2		0.10	0.10	mg/L	1	L107-06-1B		Total/NA
Specific Conductance	920		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-PZ-16RRSW

Lab Sample ID: 360-33835-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	180		100	12	ug/L	1	6010B		Dissolved
Chromium	62		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	80000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	990		100	12	ug/L	1	6010B		Total/NA
Chromium	190		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	69000	B	2000	280	ug/L	1	6010B		Total/NA

TestAmerica Westfield

Detection Summary

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Client Sample ID: OC-SW-PZ-16RRSW (Continued)

Lab Sample ID: 360-33835-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.47		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	200		20	20	mg/L	10	300.0		Total/NA
Chloride	90		10	10	mg/L	10	300.0		Total/NA
Ammonia	24		0.50	0.50	mg/L	5	L107-06-1B		Total/NA
Specific Conductance	840		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-PZ-17RRSW

Lab Sample ID: 360-33835-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	290		100	12	ug/L	1	6010B		Dissolved
Chromium	160		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	97000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	1500		100	12	ug/L	1	6010B		Total/NA
Chromium	360		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	81000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.35		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	230		20	20	mg/L	10	300.0		Total/NA
Chloride	120		10	10	mg/L	10	300.0		Total/NA
Ammonia	30		0.50	0.50	mg/L	5	L107-06-1B		Total/NA
Specific Conductance	980		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-PZ-18RSW

Lab Sample ID: 360-33835-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	100		100	12	ug/L	1	6010B		Dissolved
Chromium	7.3		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	73000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	180		100	12	ug/L	1	6010B		Total/NA
Chromium	12		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	66000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.14		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	89		2.0	2.0	mg/L	1	300.0		Total/NA
Chloride	140		10	10	mg/L	10	300.0		Total/NA
Ammonia	18		0.10	0.10	mg/L	1	L107-06-1B		Total/NA
Specific Conductance	640		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

Client Sample ID: OC-SW-SD-17

Lab Sample ID: 360-33835-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	340		100	12	ug/L	1	6010B		Dissolved
Chromium	160		5.0	0.65	ug/L	1	6010B		Dissolved
Sodium	97000	B	2000	280	ug/L	1	6010B		Dissolved
Aluminum	1400		100	12	ug/L	1	6010B		Total/NA
Chromium	330		5.0	0.65	ug/L	1	6010B		Total/NA
Sodium	82000	B	2000	280	ug/L	1	6010B		Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.42		0.050	0.050	mg/L	1	300.0		Total/NA
Sulfate	230		20	20	mg/L	10	300.0		Total/NA
Chloride	120		10	10	mg/L	10	300.0		Total/NA
Ammonia	32		0.50	0.50	mg/L	5	L107-06-1B		Total/NA
Specific Conductance	980		1.0	1.0	umhos/cm	1	SM 2510B		Total/NA

TestAmerica Westfield

Detection Summary

Client: Olin Corporation

TestAmerica Job ID: 360-33835-1

Project/Site: Olin Chemical Surfacewater Quarterly

Client Sample ID: OC-DUP

Lab Sample ID: 360-33835-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	98	J	100	12	ug/L	1		6010B	Dissolved
Chromium	7.0		5.0	0.65	ug/L	1		6010B	Dissolved
Sodium	73000	B	2000	280	ug/L	1		6010B	Dissolved
Aluminum	190		100	12	ug/L	1		6010B	Total/NA
Chromium	12		5.0	0.65	ug/L	1		6010B	Total/NA
Sodium	69000	B	2000	280	ug/L	1		6010B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.13		0.050	0.050	mg/L	1		300.0	Total/NA
Sulfate	83		20	20	mg/L	10		300.0	Total/NA
Chloride	110		10	10	mg/L	10		300.0	Total/NA
Ammonia	18		0.10	0.10	mg/L	1		L107-06-1B	Total/NA
Specific Conductance	630		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Method Summary

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method	Method Description	Protocol	Laboratory
6010B	Dissolved Metals	SW846	TAL WFD
6010B	Total Metals	SW846	TAL WFD
300.0	Chloride & Sulfate	40CFR136A	TAL WFD
300.0	Nitrate & Nitrite	40CFR136A	TAL WFD
L107-06-1B	Nitrogen Ammonia	LACHAT	TAL WFD
SM 2510B	Conductivity, Specific Conductance	SM	TAL WFD

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

LACHAT = LACHAT

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL WFD = TestAmerica Westfield, Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085, TEL (413)572-4000

Sample Summary

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
360-33835-1	OC-SW-ISCO1	Water	05/16/11 12:55	05/16/11 17:00
360-33835-2	OC-SW-ISCO2	Water	05/16/11 11:15	05/16/11 17:00
360-33835-3	OC-SW-ISCO3	Water	05/16/11 11:00	05/16/11 17:00
360-33835-4	OC-SW-PZ-16RRSW	Water	05/16/11 11:35	05/16/11 17:00
360-33835-5	OC-SW-PZ-17RRSW	Water	05/16/11 11:55	05/16/11 17:00
360-33835-6	OC-SW-PZ-18RSW	Water	05/16/11 12:30	05/16/11 17:00
360-33835-7	OC-SW-SD-17	Water	05/16/11 12:05	05/16/11 17:00
360-33835-8	OC-DUP	Water	05/16/11 12:30	05/16/11 17:00

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Client Sample Results

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Dissolved Metals - Dissolved

Client Sample ID: OC-SW-ISCO1

Date Collected: 05/16/11 12:55

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	74	J	100	12	ug/L			05/17/11 14:34	1
Chromium	5.8		5.0	0.65	ug/L			05/17/11 14:34	1
Sodium	74000	B	2000	280	ug/L			05/17/11 14:34	1

Client Sample ID: OC-SW-ISCO2

Date Collected: 05/16/11 11:15

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	150		100	12	ug/L			05/17/11 14:37	1
Chromium	16		5.0	0.65	ug/L			05/17/11 14:37	1
Sodium	66000	B	2000	280	ug/L			05/17/11 14:37	1

Client Sample ID: OC-SW-ISCO3

Date Collected: 05/16/11 11:00

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	39	J	100	12	ug/L			05/17/11 14:40	1
Chromium	ND		5.0	0.65	ug/L			05/17/11 14:40	1
Sodium	100000	B	2000	280	ug/L			05/17/11 14:40	1

Client Sample ID: OC-SW-PZ-16RRSW

Date Collected: 05/16/11 11:35

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	180		100	12	ug/L			05/17/11 14:43	1
Chromium	62		5.0	0.65	ug/L			05/17/11 14:43	1
Sodium	80000	B	2000	280	ug/L			05/17/11 14:43	1

Client Sample ID: OC-SW-PZ-17RRSW

Date Collected: 05/16/11 11:55

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	290		100	12	ug/L			05/17/11 14:51	1
Chromium	160		5.0	0.65	ug/L			05/17/11 14:51	1
Sodium	97000	B	2000	280	ug/L			05/17/11 14:51	1

Client Sample ID: OC-SW-PZ-18RSW

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100		100	12	ug/L			05/17/11 14:54	1
Chromium	7.3		5.0	0.65	ug/L			05/17/11 14:54	1
Sodium	73000	B	2000	280	ug/L			05/17/11 14:54	1

Client Sample ID: OC-SW-SD-17

Date Collected: 05/16/11 12:05

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	340		100	12	ug/L			05/17/11 15:06	1
Chromium	160		5.0	0.65	ug/L			05/17/11 15:06	1
Sodium	97000	B	2000	280	ug/L			05/17/11 15:06	1

Client Sample Results

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Dissolved Metals - Dissolved

Client Sample ID: OC-DUP

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	98	J	100	12	ug/L			05/17/11 15:09	1
Chromium	7.0		5.0	0.65	ug/L			05/17/11 15:09	1
Sodium	73000	B	2000	280	ug/L			05/17/11 15:09	1

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Client Sample Results

Client: Olin Corporation
 Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Total Metals

Client Sample ID: OC-SW-ISCO1

Date Collected: 05/16/11 12:55

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	180		100	12	ug/L		05/18/11 07:56	05/18/11 17:46	1
Chromium	12		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 17:46	1
Sodium	63000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 17:46	1

Client Sample ID: OC-SW-ISCO2

Lab Sample ID: 360-33835-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	600		100	12	ug/L		05/18/11 07:56	05/18/11 17:49	1
Chromium	65		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 17:49	1
Sodium	56000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 17:49	1

Client Sample ID: OC-SW-ISCO3

Lab Sample ID: 360-33835-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	180		100	12	ug/L		05/18/11 07:56	05/18/11 17:52	1
Chromium	ND		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 17:52	1
Sodium	87000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 17:52	1

Client Sample ID: OC-SW-PZ-16RRSW

Lab Sample ID: 360-33835-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	990		100	12	ug/L		05/18/11 07:56	05/18/11 18:01	1
Chromium	190		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 18:01	1
Sodium	69000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 18:01	1

Client Sample ID: OC-SW-PZ-17RRSW

Lab Sample ID: 360-33835-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1500		100	12	ug/L		05/18/11 07:56	05/18/11 18:04	1
Chromium	360		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 18:04	1
Sodium	81000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 18:04	1

Client Sample ID: OC-SW-PZ-18RSW

Lab Sample ID: 360-33835-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	180		100	12	ug/L		05/18/11 07:56	05/18/11 17:32	1
Chromium	12		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 17:32	1
Sodium	66000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 17:32	1

Client Sample ID: OC-SW-SD-17

Lab Sample ID: 360-33835-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1400		100	12	ug/L		05/18/11 07:56	05/18/11 18:07	1
Chromium	330		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 18:07	1
Sodium	82000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 18:07	1

TestAmerica Westfield

Client Sample Results

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Total Metals

Client Sample ID: OC-DUP

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	190		100	12	ug/L		05/18/11 07:56	05/18/11 18:10	1
Chromium	12		5.0	0.65	ug/L		05/18/11 07:56	05/18/11 18:10	1
Sodium	69000	B	2000	280	ug/L		05/18/11 07:56	05/18/11 18:10	1

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Client Sample Results

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

General Chemistry

Client Sample ID: OC-SW-ISCO1

Date Collected: 05/16/11 12:55

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-1

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.14		0.050	0.050	mg/L			05/17/11 11:35	1
Sulfate	89		2.0	2.0	mg/L			05/17/11 11:35	1
Chloride	110		10	10	mg/L			05/17/11 11:50	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 11:35	1
Ammonia	18		0.10	0.10	mg/L	05/18/11 11:03	05/18/11 13:39		1
Specific Conductance	630		1.0	1.0	umhos/cm			05/19/11 12:15	1

Client Sample ID: OC-SW-ISCO2

Date Collected: 05/16/11 11:15

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-2

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.57		0.050	0.050	mg/L			05/17/11 12:05	1
Sulfate	190		20	20	mg/L			05/17/11 12:21	10
Chloride	70		10	10	mg/L			05/17/11 12:21	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 12:05	1
Ammonia	28		0.50	0.50	mg/L	05/18/11 11:03	05/18/11 13:47		5
Specific Conductance	740		1.0	1.0	umhos/cm			05/19/11 12:15	1

Client Sample ID: OC-SW-ISCO3

Date Collected: 05/16/11 11:00

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-3

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.1		0.050	0.050	mg/L			05/17/11 12:36	1
Sulfate	99		2.0	2.0	mg/L			05/17/11 12:36	1
Chloride	190		10	10	mg/L			05/17/11 12:51	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 12:36	1
Ammonia	8.2		0.10	0.10	mg/L	05/20/11 14:12	05/25/11 14:43		1
Specific Conductance	920		1.0	1.0	umhos/cm			05/19/11 12:15	1

Client Sample ID: OC-SW-PZ-16RRSW

Date Collected: 05/16/11 11:35

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-4

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.47		0.050	0.050	mg/L			05/17/11 13:36	1
Sulfate	200		20	20	mg/L			05/17/11 13:51	10
Chloride	90		10	10	mg/L			05/17/11 13:51	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 13:36	1
Ammonia	24		0.50	0.50	mg/L	05/20/11 14:12	05/25/11 15:53		5
Specific Conductance	840		1.0	1.0	umhos/cm			05/26/11 08:38	1

Client Sample ID: OC-SW-PZ-17RRSW

Date Collected: 05/16/11 11:55

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-5

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.35		0.050	0.050	mg/L			05/17/11 14:06	1
Sulfate	230		20	20	mg/L			05/17/11 14:21	10
Chloride	120		10	10	mg/L			05/17/11 14:21	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 14:06	1
Ammonia	30		0.50	0.50	mg/L	05/20/11 14:12	05/25/11 15:54		5
Specific Conductance	980		1.0	1.0	umhos/cm			05/26/11 08:38	1

Client Sample Results

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

General Chemistry

Client Sample ID: OC-SW-PZ-18RSW

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-6

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.14		0.050	0.050	mg/L			05/17/11 10:35	1
Sulfate	89		2.0	2.0	mg/L			05/17/11 10:35	1
Chloride	140		10	10	mg/L			05/17/11 10:50	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 10:35	1
Ammonia	18		0.10	0.10	mg/L	05/20/11 14:12	05/25/11 14:41		1
Specific Conductance	640		1.0	1.0	umhos/cm			05/26/11 08:38	1

Client Sample ID: OC-SW-SD-17

Date Collected: 05/16/11 12:05

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-7

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.42		0.050	0.050	mg/L			05/17/11 14:36	1
Sulfate	230		20	20	mg/L			05/17/11 14:52	10
Chloride	120		10	10	mg/L			05/17/11 14:52	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 14:36	1
Ammonia	32		0.50	0.50	mg/L	05/20/11 14:12	05/25/11 15:55		5
Specific Conductance	980		1.0	1.0	umhos/cm			05/26/11 08:38	1

Client Sample ID: OC-DUP

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-8

Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.13		0.050	0.050	mg/L			05/17/11 15:07	1
Sulfate	83		20	20	mg/L			05/17/11 15:22	10
Chloride	110		10	10	mg/L			05/17/11 15:22	10
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 15:07	1
Ammonia	18		0.10	0.10	mg/L	05/20/11 14:12	05/25/11 14:47		1
Specific Conductance	630		1.0	1.0	umhos/cm			05/26/11 08:38	1

Definitions/Glossary

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
✉	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

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QC Association Summary

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Metals

Analysis Batch: 73721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 360-73721/17	LCS 360-73721/17	Total/NA	Water	6010B	
MB 360-73721/18	MB 360-73721/18	Total/NA	Water	6010B	5
360-33835-1	OC-SW-ISCO1	Dissolved	Water	6010B	
360-33835-2	OC-SW-ISCO2	Dissolved	Water	6010B	6
360-33835-3	OC-SW-ISCO3	Dissolved	Water	6010B	
360-33835-4	OC-SW-PZ-16RRSW	Dissolved	Water	6010B	7
LCSD 360-73721/29	LCSD 360-73721/29	Total/NA	Water	6010B	
360-33835-5	OC-SW-PZ-17RRSW	Dissolved	Water	6010B	8
360-33835-6	OC-SW-PZ-18RSW	Dissolved	Water	6010B	
360-33835-6MS	OC-SW-PZ-18RSW	Dissolved	Water	6010B	9
360-33835-6MSD	OC-SW-PZ-18RSW	Dissolved	Water	6010B	
360-33835-7	OC-SW-SD-17	Dissolved	Water	6010B	
360-33835-8	OC-DUP	Dissolved	Water	6010B	10

Prep Batch: 73734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73734/1-A	MB 360-73734/1-A	Total/NA	Water	3010A	12
LCS 360-73734/2-A	LCS 360-73734/2-A	Total/NA	Water	3010A	
LCSD 360-73734/3-A	LCSD 360-73734/3-A	Total/NA	Water	3010A	13
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	3010A	
360-33835-6MS	OC-SW-PZ-18RSW	Total/NA	Water	3010A	
360-33835-6MSD	OC-SW-PZ-18RSW	Total/NA	Water	3010A	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	3010A	
360-33835-2	OC-SW-ISCO2	Total/NA	Water	3010A	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	3010A	
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	3010A	
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	3010A	
360-33835-7	OC-SW-SD-17	Total/NA	Water	3010A	
360-33835-8	OC-DUP	Total/NA	Water	3010A	

Analysis Batch: 73826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73734/1-A	MB 360-73734/1-A	Total/NA	Water	6010B	73734
LCS 360-73734/2-A	LCS 360-73734/2-A	Total/NA	Water	6010B	73734
LCSD 360-73734/3-A	LCSD 360-73734/3-A	Total/NA	Water	6010B	73734
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	6010B	73734
360-33835-6MS	OC-SW-PZ-18RSW	Total/NA	Water	6010B	73734
360-33835-6MSD	OC-SW-PZ-18RSW	Total/NA	Water	6010B	73734
360-33835-1	OC-SW-ISCO1	Total/NA	Water	6010B	73734
360-33835-2	OC-SW-ISCO2	Total/NA	Water	6010B	73734
360-33835-3	OC-SW-ISCO3	Total/NA	Water	6010B	73734
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	6010B	73734
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	6010B	73734
360-33835-7	OC-SW-SD-17	Total/NA	Water	6010B	73734
360-33835-8	OC-DUP	Total/NA	Water	6010B	73734

General Chemistry

Analysis Batch: 73745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73745/3	MB 360-73745/3	Total/NA	Water	300.0	
LCS 360-73745/4	LCS 360-73745/4	Total/NA	Water	300.0	

TestAmerica Westfield

QC Association Summary

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

General Chemistry (Continued)

Analysis Batch: 73745 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	300.0	
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	300.0	
360-33835-6MS	OC-SW-PZ-18RSW	Total/NA	Water	300.0	
360-33835-6MSD	OC-SW-PZ-18RSW	Total/NA	Water	300.0	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	300.0	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	300.0	
360-33835-2	OC-SW-ISCO2	Total/NA	Water	300.0	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	300.0	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	300.0	
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	300.0	
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	300.0	
360-33835-7	OC-SW-SD-17	Total/NA	Water	300.0	
360-33835-8	OC-DUP	Total/NA	Water	300.0	

Analysis Batch: 73752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73752/3	MB 360-73752/3	Total/NA	Water	300.0	
LCS 360-73752/4	LCS 360-73752/4	Total/NA	Water	300.0	
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	300.0	
360-33835-6MS	OC-SW-PZ-18RSW MS	Total/NA	Water	300.0	
360-33835-6MSD	OC-SW-PZ-18RSW MSD	Total/NA	Water	300.0	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	300.0	
360-33835-2	OC-SW-ISCO2	Total/NA	Water	300.0	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	300.0	
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	300.0	
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	300.0	
360-33835-7	OC-SW-SD-17	Total/NA	Water	300.0	
360-33835-8	OC-DUP	Total/NA	Water	300.0	

Prep Batch: 73763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73763/1-A	MB 360-73763/1-A	Total/NA	Water	Distill/Ammonia	
LCS 360-73763/2-A	LCS 360-73763/2-A	Total/NA	Water	Distill/Ammonia	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	Distill/Ammonia	
360-33835-2	OC-SW-ISCO2	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 73792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 360-73763/2-A	LCS 360-73763/2-A	Total/NA	Water	L107-06-1B	73763
360-33835-1	OC-SW-ISCO1	Total/NA	Water	L107-06-1B	73763
MB 360-73763/1-A	MB 360-73763/1-A	Total/NA	Water	L107-06-1B	73763
360-33835-2	OC-SW-ISCO2	Total/NA	Water	L107-06-1B	73763

Analysis Batch: 73875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73875/1	MB 360-73875/1	Total/NA	Water	SM 2510B	
LCS 360-73875/2	LCS 360-73875/2	Total/NA	Water	SM 2510B	
360-33835-1	OC-SW-ISCO1	Total/NA	Water	SM 2510B	
360-33835-2	OC-SW-ISCO2	Total/NA	Water	SM 2510B	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	SM 2510B	

QC Association Summary

Client: Olin Corporation

TestAmerica Job ID: 360-33835-1

Project/Site: Olin Chemical Surfacewater Quarterly

General Chemistry (Continued)

Prep Batch: 73943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73943/1-A	MB 360-73943/1-A	Total/NA	Water	Distill/Ammonia	
LCS 360-73943/2-A	LCS 360-73943/2-A	Total/NA	Water	Distill/Ammonia	
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	Distill/Ammonia	
360-33835-6MS	OC-SW-PZ-18RSW	Total/NA	Water	Distill/Ammonia	
360-33835-6MSD	OC-SW-PZ-18RSW	Total/NA	Water	Distill/Ammonia	
360-33835-3	OC-SW-ISCO3	Total/NA	Water	Distill/Ammonia	
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	Distill/Ammonia	
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	Distill/Ammonia	
360-33835-7	OC-SW-SD-17	Total/NA	Water	Distill/Ammonia	
360-33835-8	OC-DUP	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 74232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-74232/1	MB 360-74232/1	Total/NA	Water	SM 2510B	
LCS 360-74232/2	LCS 360-74232/2	Total/NA	Water	SM 2510B	
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	SM 2510B	
360-33835-6 DU	OC-SW-PZ-18RSW	Total/NA	Water	SM 2510B	
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	SM 2510B	
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	SM 2510B	
360-33835-7	OC-SW-SD-17	Total/NA	Water	SM 2510B	
360-33835-8	OC-DUP	Total/NA	Water	SM 2510B	

Analysis Batch: 74241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 360-73943/1-A	MB 360-73943/1-A	Total/NA	Water	L107-06-1B	73943
360-33835-6	OC-SW-PZ-18RSW	Total/NA	Water	L107-06-1B	73943
360-33835-3	OC-SW-ISCO3	Total/NA	Water	L107-06-1B	73943
360-33835-8	OC-DUP	Total/NA	Water	L107-06-1B	73943
LCS 360-73943/2-A	LCS 360-73943/2-A	Total/NA	Water	L107-06-1B	73943
360-33835-6MS	OC-SW-PZ-18RSW	Total/NA	Water	L107-06-1B	73943
360-33835-6MSD	OC-SW-PZ-18RSW	Total/NA	Water	L107-06-1B	73943
360-33835-4	OC-SW-PZ-16RRSW	Total/NA	Water	L107-06-1B	73943
360-33835-5	OC-SW-PZ-17RRSW	Total/NA	Water	L107-06-1B	73943
360-33835-7	OC-SW-SD-17	Total/NA	Water	L107-06-1B	73943

QC Sample Results

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Dissolved Metals

Lab Sample ID: MB 360-73721/18

Matrix: Water

Analysis Batch: 73721

Client Sample ID: MB 360-73721/18

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		100	12	ug/L			05/17/11 13:59	1
Chromium	ND		5.0	0.65	ug/L			05/17/11 13:59	1
Sodium	359	J	2000	280	ug/L			05/17/11 13:59	1

Lab Sample ID: LCS 360-73721/17

Matrix: Water

Analysis Batch: 73721

Client Sample ID: LCS 360-73721/17

Prep Type: Total/NA

Analyte	Spike Added	LCS			% Rec.			Limits
		Result	Qualifier	Unit	D	% Rec		
Aluminum	5000	5190		ug/L		104	80 - 120	
Chromium	1000	996		ug/L		100	80 - 120	
Sodium	20000	19500		ug/L		97	80 - 120	

Lab Sample ID: LCSD 360-73721/29

Matrix: Water

Analysis Batch: 73721

Client Sample ID: LCSD 360-73721/29

Prep Type: Total/NA

Analyte	Spike Added	LCSD			% Rec.			RPD	Limit
		Result	Qualifier	Unit	D	% Rec			
Aluminum	5000	5150		ug/L		103	80 - 120	1	20
Chromium	1000	985		ug/L		98	80 - 120	1	20
Sodium	20000	19400		ug/L		97	80 - 120	1	20

Lab Sample ID: MB 360-73734/1-A

Matrix: Water

Analysis Batch: 73826

Client Sample ID: MB 360-73734/1-A

Prep Type: Total/NA

Prep Batch: 73734

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		100	12	ug/L			05/18/11 07:56	05/18/11 17:17
Chromium	ND		5.0	0.65	ug/L			05/18/11 07:56	05/18/11 17:17
Sodium	356	J	2000	280	ug/L			05/18/11 07:56	05/18/11 17:17

Lab Sample ID: LCS 360-73734/2-A

Matrix: Water

Analysis Batch: 73826

Client Sample ID: LCS 360-73734/2-A

Prep Type: Total/NA

Prep Batch: 73734

Analyte	Spike Added	LCS			% Rec.			Limits
		Result	Qualifier	Unit	D	% Rec		
Aluminum	5000	5130		ug/L		103	80 - 120	
Chromium	1000	979		ug/L		98	80 - 120	
Sodium	20000	18800		ug/L		94	80 - 120	

Lab Sample ID: LCSD 360-73734/3-A

Matrix: Water

Analysis Batch: 73826

Client Sample ID: LCSD 360-73734/3-A

Prep Type: Total/NA

Prep Batch: 73734

Analyte	Spike Added	LCSD			% Rec.			RPD	Limit
		Result	Qualifier	Unit	D	% Rec			
Aluminum	5000	5210		ug/L		104	80 - 120	2	20
Chromium	1000	996		ug/L		100	80 - 120	2	20
Sodium	20000	19000		ug/L		95	80 - 120	1	20

QC Sample Results

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 6010B - Total Metals (Continued)

Lab Sample ID: 360-33835-6MS

Matrix: Water

Analysis Batch: 73826

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Prep Batch: 73734

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Aluminum	180		5000	5260		ug/L		101	75 - 125
Chromium	12		1000	973		ug/L		96	75 - 125
Sodium	66000	B	20000	84700		ug/L		92	75 - 125

Lab Sample ID: 360-33835-6MSD

Matrix: Water

Analysis Batch: 73826

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Prep Batch: 73734

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	
Aluminum	180		5000	5370		ug/L		104	75 - 125	2
Chromium	12		1000	995		ug/L		98	75 - 125	2
Sodium	66000	B	20000	87000		ug/L		103	75 - 125	3

Lab Sample ID: 360-33835-6MS

Matrix: Water

Analysis Batch: 73721

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Dissolved

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Aluminum	100		5000	5280		ug/L		104	75 - 125
Chromium	7.3		1000	990		ug/L		98	75 - 125
Sodium	73000	B	20000	90700		ug/L		87	75 - 125

Lab Sample ID: 360-33835-6MSD

Matrix: Water

Analysis Batch: 73721

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Dissolved

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	
Aluminum	100		5000	5250		ug/L		103	75 - 125	1
Chromium	7.3		1000	985		ug/L		98	75 - 125	1
Sodium	73000	B	20000	90400		ug/L		85	75 - 125	0

Method: 300.0 - Chloride & Sulfate

Lab Sample ID: MB 360-73745/3

Matrix: Water

Analysis Batch: 73745

Client Sample ID: MB 360-73745/3

Prep Type: Total/NA

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		2.0	2.0	mg/L			05/17/11 10:04	1
Chloride	ND		1.0	1.0	mg/L			05/17/11 10:04	1

Lab Sample ID: LCS 360-73745/4

Matrix: Water

Analysis Batch: 73745

Client Sample ID: LCS 360-73745/4

Prep Type: Total/NA

Analyte	Spike			LCS	LCS	Unit	D	% Rec	Limits
	Added	Result	Qualifier		Added	Result			
Sulfate	80.0	81.4		mg/L		102		85 - 115	
Chloride	40.0	41.3		mg/L		103		85 - 115	

QC Sample Results

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: 300.0 - Chloride & Sulfate (Continued)

Lab Sample ID: 360-33835-6MS

Matrix: Water

Analysis Batch: 73745

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Sulfate	110		200	340		mg/L	117	75 - 125	
Chloride	140		100	251		mg/L	112	75 - 125	

Lab Sample ID: 360-33835-6MSD

Matrix: Water

Analysis Batch: 73745

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Sulfate	110		200	249	F	mg/L	72	75 - 125	31	20	
Chloride	140		100	186	F	mg/L	47	75 - 125	30	20	

Lab Sample ID: MB 360-73752/3

Matrix: Water

Analysis Batch: 73752

Client Sample ID: MB 360-73752/3

Prep Type: Total/NA

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrate as N	ND		0.050	0.050	mg/L			05/17/11 10:04	1
Nitrite as N	ND		0.010	0.010	mg/L			05/17/11 10:04	1

Lab Sample ID: LCS 360-73752/4

Matrix: Water

Analysis Batch: 73752

Client Sample ID: LCS 360-73752/4

Prep Type: Total/NA

Analyte	MB	MB	Spike	LCS	LCS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Nitrate as N			4.00	4.14		mg/L		103	85 - 115
Nitrite as N			4.00	4.08		mg/L		102	85 - 115

Lab Sample ID: 360-33835-6MS

Matrix: Water

Analysis Batch: 73752

Client Sample ID: OC-SW-PZ-18RSW MS

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Nitrate as N	ND		10.0	12.4		mg/L	124	75 - 125	
Nitrite as N	ND		10.0	11.3		mg/L	113	75 - 125	

Lab Sample ID: 360-33835-6MSD

Matrix: Water

Analysis Batch: 73752

Client Sample ID: OC-SW-PZ-18RSW MSD

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Nitrate as N	ND		10.0	9.18	F	mg/L	92	75 - 125	30	20
Nitrite as N	ND		10.0	8.40	F	mg/L	84	75 - 125	29	20

Method: L107-06-1B - Nitrogen Ammonia

Lab Sample ID: MB 360-73763/1-A

Matrix: Water

Analysis Batch: 73792

Client Sample ID: MB 360-73763/1-A

Prep Type: Total/NA

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia	ND		0.10	0.10	mg/L		05/18/11 11:03	05/18/11 13:43	1

TestAmerica Westfield

QC Sample Results

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: L107-06-1B - Nitrogen Ammonia (Continued)

Lab Sample ID: LCS 360-73763/2-A

Matrix: Water

Analysis Batch: 73792

Client Sample ID: LCS 360-73763/2-A

Prep Type: Total/NA

Prep Batch: 73763

Analyte		Spike	LCS	LCS	Unit	D	% Rec	% Rec.
		Added	Result	Qualifier				
Ammonia		10.0	9.51		mg/L	95	90 - 110	

Lab Sample ID: MB 360-73943/1-A

Matrix: Water

Analysis Batch: 74241

Client Sample ID: MB 360-73943/1-A

Prep Type: Total/NA

Prep Batch: 73943

Analyte	MB	MB	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Ammonia	ND		0.10		0.10		mg/L	05/20/11 14:12	05/25/11 14:39		1

Lab Sample ID: LCS 360-73943/2-A

Matrix: Water

Analysis Batch: 74241

Client Sample ID: LCS 360-73943/2-A

Prep Type: Total/NA

Prep Batch: 73943

Analyte	Spike	LCS	LCS	Unit	D	% Rec	% Rec.
	Added	Result	Qualifier				
Ammonia	10.0	9.81		mg/L	98	90 - 110	

Lab Sample ID: 360-33835-6MS

Matrix: Water

Analysis Batch: 74241

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Prep Batch: 73943

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				
Ammonia	18		10.0	22.7	F	mg/L	48	90 - 110	

Lab Sample ID: 360-33835-6MSD

Matrix: Water

Analysis Batch: 74241

Client Sample ID: OC-SW-PZ-18RSW

Prep Type: Total/NA

Prep Batch: 73943

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				
Ammonia	18		10.0	22.0	F	mg/L	41	90 - 110	3

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 360-73875/1

Matrix: Water

Analysis Batch: 73875

Client Sample ID: MB 360-73875/1

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Specific Conductance	ND		1.0		1.0		umhos/cm			05/19/11 12:15	1

Lab Sample ID: LCS 360-73875/2

Matrix: Water

Analysis Batch: 73875

Client Sample ID: LCS 360-73875/2

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	% Rec	Limits
	Added	Result	Qualifier				
Specific Conductance	1410	1380		umhos/cm	98	85 - 115	

QC Sample Results

Client: Olin Corporation
 Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: MB 360-74232/1

Matrix: Water

Analysis Batch: 74232

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			05/26/11 08:38	1

Lab Sample ID: LCS 360-74232/2

Matrix: Water

Analysis Batch: 74232

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.	Limits
Specific Conductance	1410	1400		umhos/cm		99	85 - 115

Lab Sample ID: 360-33835-6 DU

Matrix: Water

Analysis Batch: 74232

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	640		627		umhos/cm		2	20

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DILUTION LOGS

TestAmerica Westfield
Analytical Dilution Preparation Log

Date:

Analyst Initials	Date	Method	LIMS Sample ID	Rpt'd Dil.	Serial Dilution		Comments
					Sample Aliquot 1	Final Volume 1	
RUE	5-17-11	300.0	33835D6	10X	1	10 μL	
				01	10X	1	(10)
				02	10X	1	(10)
				03	10X	1	(10)
				04	10X	1	(10)
				05	10X	1	(10)
				06	10X	1	(10)
				07	10X	1	(10)
				08	10X	1	(10)

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TestAmerica Westfield

Date:

entries completed by day [new page each day]

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TestAmerica Westfield
Analytical Dilution Preparation Log

Date: 5-25-11

Analyst Initials	Date	Method	LIMS Sample ID	Rpt'd Dil.	Sample Aliquot 1	Final Volume 1	Serial Dilution			Comments
							Sample Aliquot 2	Final Volume 2	Units	
FUE	5-25-11	NH3	33835A6BMS	5X	1	μL	5	μL		
			ACCMSD	5X	1		5			
			AHA	5X	1		5			
			ASA	5X	1		5			
			ATA	5X	1		5			
			33892CRA	10X	1		10			
			C16A	10X	1		10			
			ClabMS	10X	1		10			
			Clodus	10X	1		10			
			C3A	5X	1		5			
			C5A	5X	1		5			
			C7A	5X	1		5			
			C11A	10X	1		10			
			C12A	5X	1		5			
			C13A	5X	1		5			
			C14A	10X	1		10			
			C15A	10X	1		10			
			C16A	5X	1		5			
			C17A	10X	500	μL	10	μL		

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TestAmerica Westfield

Analytical Dilution Preparation Log

Date: 5-25-11

Analyst Initials	Date	Method	LIMS Sample ID	Rpt'd Dil.	Sample Aliquot 1	Final Volume 1	Sample Aliquot 2	Final Volume 2	Serial Dilution	
									Units	Units
RUE	5-25-11	Nt3	33892C18A	10X	1	μL	10	μL		
			33893G1A	5X	1		5			
			33892C17C	5X	1		5			
			33892C17C	20X	500	μL	10	μL		
			C17DMS	20X	1		1			
			C17EHSO	20X	1		1			
			C19A	20X	500	μL	10	μL		
			33893G6A	10X	1	μL	10	μL		
			33914G7A	20X	500	μL	10	μL		
			G9A	5X	1		5			
RUE	5-25-11	Nt3	33892C18A	20X	500	μL	10	μL		

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Lab Chronicle

Client: Olin Corporation
 Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Client Sample ID: OC-SW-ISCO1

Lab Sample ID: 360-33835-1

Date Collected: 05/16/11 12:55

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:34	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 17:46	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 11:50	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73745	05/17/11 11:35	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 11:35	RWE	TAL WFD
Total/NA	Prep	Distill/Ammonia			73763	05/18/11 11:03	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		1	73792	05/18/11 13:39	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	73875	05/19/11 12:15	AMS	TAL WFD

Client Sample ID: OC-SW-ISCO2

Lab Sample ID: 360-33835-2

Date Collected: 05/16/11 11:15

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:37	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 17:49	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 12:21	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 12:05	RWE	TAL WFD
Total/NA	Prep	Distill/Ammonia			73763	05/18/11 11:03	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		5	73792	05/18/11 13:47	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	73875	05/19/11 12:15	AMS	TAL WFD

Client Sample ID: OC-SW-ISCO3

Lab Sample ID: 360-33835-3

Date Collected: 05/16/11 11:00

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:40	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 17:52	TJS	TAL WFD
Total/NA	Analysis	300.0		1	73745	05/17/11 12:36	RWE	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 12:51	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 12:36	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	73875	05/19/11 12:15	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		1	74241	05/25/11 14:43	RWE	TAL WFD

Lab Chronicle

Client: Olin Corporation
 Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Client Sample ID: OC-SW-PZ-16RRSW

Lab Sample ID: 360-33835-4

Date Collected: 05/16/11 11:35

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:43	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 18:01	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 13:51	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 13:36	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	74232	05/26/11 08:38	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		5	74241	05/25/11 15:53	RWE	TAL WFD

Client Sample ID: OC-SW-PZ-17RRSW

Lab Sample ID: 360-33835-5

Date Collected: 05/16/11 11:55

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:51	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 18:04	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 14:21	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 14:06	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	74232	05/26/11 08:38	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		5	74241	05/25/11 15:54	RWE	TAL WFD

Client Sample ID: OC-SW-PZ-18RSW

Lab Sample ID: 360-33835-6

Date Collected: 05/16/11 12:30

Matrix: Water

Date Received: 05/16/11 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 14:54	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 17:32	TJS	TAL WFD
Total/NA	Analysis	300.0		1	73745	05/17/11 10:35	RWE	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 10:50	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 10:35	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	74232	05/26/11 08:38	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		1	74241	05/25/11 14:41	RWE	TAL WFD

Lab Chronicle

Client: Olin Corporation
Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Client Sample ID: OC-SW-SD-17

Date Collected: 05/16/11 12:05

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 15:06	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 18:07	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 14:52	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 14:36	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	74232	05/26/11 08:38	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		5	74241	05/25/11 15:55	RWE	TAL WFD

Client Sample ID: OC-DUP

Date Collected: 05/16/11 12:30

Date Received: 05/16/11 17:00

Lab Sample ID: 360-33835-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Analysis	6010B		1	73721	05/17/11 15:09	TJS	TAL WFD
Total/NA	Prep	3010A			73734	05/18/11 07:56	EMN	TAL WFD
Total/NA	Analysis	6010B		1	73826	05/18/11 18:10	TJS	TAL WFD
Total/NA	Analysis	300.0		10	73745	05/17/11 15:22	RWE	TAL WFD
Total/NA	Analysis	300.0		1	73752	05/17/11 15:07	RWE	TAL WFD
Total/NA	Analysis	SM 2510B		1	74232	05/26/11 08:38	AMS	TAL WFD
Total/NA	Prep	Distill/Ammonia			73943	05/20/11 14:12	RWE	TAL WFD
Total/NA	Analysis	L107-06-1B		1	74241	05/25/11 14:47	RWE	TAL WFD

Laboratory References:

TAL WFD = TestAmerica Westfield, Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085, TEL (413)572-4000

Certification Summary

Client: Olin Corporation

Project/Site: Olin Chemical Surfacewater Quarterly

TestAmerica Job ID: 360-33835-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Westfield	Connecticut	State Program	1	PH-0494
TestAmerica Westfield	Florida	NELAC	4	E87912
TestAmerica Westfield	Maine	State Program	1	MA00014
TestAmerica Westfield	Massachusetts	State Program	1	M-MA014
TestAmerica Westfield	New Hampshire	NELAC	1	2539
TestAmerica Westfield	New Jersey	NELAC	2	MA008
TestAmerica Westfield	New York	NELAC	2	10843
TestAmerica Westfield	North Carolina	North Carolina DENR	4	647
TestAmerica Westfield	Rhode Island	State Program	1	LAO00057
TestAmerica Westfield	Vermont	State Program	1	VT-10843

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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State Accreditation Matrix

Method Name	Description	State where Primary Accreditation is Carried				
		New Hampshire (NELAC) prim.	Mass	Conn	Florida (NELAC)	North Carolina
821-R-02-012	Toxicity, Acute (48-Hour)(list upon request)	NP			NP	
SM 4500 CI F	Chlorine, Residual		NP			
SM 9215E	Heterotrophic Plate Count (SimPlate)		P			
SM 9222D	Coliforms, Fecal (Membrane Filter)		P/NP			
SM 9223	Coliforms, Total, and E.Coli (Colilert-P/A)		P			
SM 9224	Coliforms, Total, and E.Coli (Enumeration)		P			
1103.1	E.coli		ambient/source			
Enterolert	Enterococcus					
200.8 Rev 5.4	Metals (ICP/MS) (list upon request)	NP/P	NP/P	NP/P		
200.7 Rev 4.4	Metals (ICP)(list upon request)	NP/P	NP/P	NP/P		
6010B	Metals (ICP)(list upon request)	NP/SW		NP/SW		
245.1	Mercury (CVAA)	NP/P	NP	NP/P		
7470A	Mercury (CVAA)	NP		NP		
7471A	Mercury (CVAA)	SW		SW		
SM 2340B	Total Hardness (as CaCO ₃) by calculation	NP/P	NP	NP/P		
3005A	Preparation, Total Recoverable or Dissolved Metals	NP/P		NP/P		
3010A	Preparation, Total Metals	NP/P		NP/P		
3020A	Preparation, Total Metals	NP/P/SW		NP/P/SW		
3050B	Preparation, Metals	SW		SW		
504.1	EDB, DBCP and 1,2,3-TCP (GC)	P	P	P		
608	Organochlorine Pest/PCBs (list upon request)	NP	NP	NP		
625	Semivolatile Org Comp (GC/MS)(list upon request)	NP		NP		
3546	Microwave Extraction	SW				
3510C	Liquid-Liquid Extraction (Separatory Funnel)	NP		NP		
3540C	Soxhlet Extraction	SW				
3550B	Ultrasonic Extraction	SW		SW		
600/4-81-045	Polychlorinated Biphenyls (PCBs) (GC)		NP	NP		
8081A	Organochlorine Pesticides (GC)(list upon request)	NP/SW		NP/SW		
8082	PCBs by Gas Chromatography(list upon request)	NP/SW		NP/SW		
8270C	Semivolatile Comp.(GC/MS)(list upon request)	NP/SW		NP/SW		
CT ETPH	Conn - Ext. Total petroleum Hydrocarbons (GC)			NP/SW		
MA-EPH	Mass - Extractable Petroleum Hydrocarbons (GC)			NP/SW	NP/SW	
524.2	Volatile Org Comp (GC/MS)(list upon request)	P	P	P		
524.2	Trihalomethane compounds	P	P	P		
624	Volatile Org Comp (GC/MS)(list upon request)	NP	NP	NP		
5035	Closed System Purge and Trap	SW		SW		
5030B	Purge and Trap	NP		NP		
8260B	Volatile Org Comp. (GC/MS)(list upon request)	NP/SW		NP/SW		
MAVPH	Mass - Volatile Petroleum Hydrocarbons (GC)			NP/SW	NP/SW	
180.1	Turbidity, Nephelometric	P	P	P		
300	Anions, Ion Chromatography	NP/P	NP/P	NP/P		
410.4	COD	NP	NP	NP		
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW		SW		
10-107-06-2	Nitrogen, Total Kjeldahl	NP	NP	NP		
7196A	Chromium, Hexavalent	NP/SW		NP/SW		
9012A	Cyanide, Total and/or Amenable	NP/SW		NP/SW		
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	NP		NP		
9040B	pH	NP		NP		
9045C	pH	SW		SW		
L107041C	Nitrogen, Nitrate	NP	P	NP/P		
L107-06-1B	Nitrogen Ammonia	NP	NP	NP/P		
L204001A CN	Cyanide, Total	P	NP/P	NP/P		
L210-001A	Phenolics, Total Recoverable	NP	NP	NP		
SM 2320B	Alkalinity	NP/P	NP/P	NP/P		
SM 2510B	Conductivity, Specific Conductance	NP/P	NP/P	NP/P		
SM 2540C	Solids, Total Dissolved (TDS)	NP/P	NP/P	NP/P		
SM 2540D	Solids, Total Suspended (TSS)	NP	NP	NP		
SM 3500 CR D	Chromium, Hexavalent	NP		NP		
SM 4500 H+ B	pH	NP/P	NP/P	NP/P		
SM 4500 NO ₂ B	Nitrogen, Nitrite	NP	P	NP/P		
SM 4500 P E	Phosphorus, Orthophosphate	NP/P	NP	NP/P		
SM 4500 P E	Phosphorus, Total	NP	NP	NP		
SM 4500 S2 D	Sulfide, Total	NP		NP		
SM 5210B	BOD, 5-Day	NP	NP	NP		
SM 5310B	Organic Carbon, Total (TOC)	NP/P	NP	NP/P		

Not all organic compounds are accredited under NELAC

For methods with multiple compounds all compounds may not meet NELAC criteria, listing should be obtained from the laboratory

The lab carries additional accreditations with several states. This is the laboratories typical listing but is subject to change based on the laboratories current certification standing.

Login Sample Receipt Checklist

Client: Olin Corporation

Job Number: 360-33835-1

Login Number: 33835

List Source: TestAmerica Westfield

List Number: 1

Creator: Ard, Vanessa L

Question	Answer	Comment	
Radioactivity either was not measured or, if measured, is at or below background	N/A		1
The cooler's custody seal, if present, is intact.	N/A		2
The cooler or samples do not appear to have been compromised or tampered with.	True		3
Samples were received on ice.	True		4
Cooler Temperature is acceptable.	True		5
Cooler Temperature is recorded.	True		6
COC is present.	True		7
COC is filled out in ink and legible.	True		8
COC is filled out with all pertinent information.	True		9
Is the Field Sampler's name present on COC?	True		10
There are no discrepancies between the sample IDs on the containers and the COC.	True		11
Samples are received within Holding Time.	True		12
Sample containers have legible labels.	True		13
Containers are not broken or leaking.	True		14
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

Sampler				Lab PM:

Westfield, MA 01085
Phone (413) 572-4000 Fax (413) 572-3707

Client Information		Lab Info:		Carrier Tracking No(s):	
Client Contact	Mr. John Burkhardt	Lab Ph:	Mason, Becky C	Page:	
James Cashwell	Phone: 978-658-6121	E-Mail:	becky.mason@testamericainc.com	Job #:	300-1639015
Company:	Olin Corp				
Address:	51Eames Street	Due Date Requested:		Preservation Codes:	
City:	Wilmington	TAT Requested (days):		A - HCl	M - Hexane
State, Zip:	MA			B - NaOH	N - None
Phone:				C - Zn Acetate	O - AskaO2
Email:				D - Nitric Acid	P - Na2CO3
Project Name:	Olin Surface water Quarterly	PO#:	REWI0013	E - NaHSO4	Q - Na2SCO3
Site:	SSOW#:	VO#:		F - MeOH	R - Na2S2O3
				G - Amchol	S - H2SO4
				H - Ascorbic Acid	T - TSP Dodecahydrate
				I - Ca	U - Acetone
				J - Di Water	V - MCAA
				K - EDTA	W - pH 4-5
				L - EDA	Z - other (specify)
				Other:	
Analysis Requested					
Total Number of containers					
6010B Total Al/Cr/Na					
6010B - Spec. Cond. 300.0_28DSO4Cl, 300_48HRN03/N02					
LAC-H_107_06_1-B_Ammomia					
6010B - Field Filtered Al/Cr/Na					
2610B Spec. Cond. 300.0_28DSO4Cl, 300_48HRN03/N02					
Report/Ms/MSD (yes or No)					
Field Filtered Sample (yes or No)					
Sample Identification					
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Sample Matrix (W=water, S=solid, C=water+oil, B=tissue, A=aer)	Preservation Code	Special Instructions/Note:
OC-SW-ISCO1	12:55	G	Water	Y	X X X X
OC-SW-ISCO2	11:15	G	Water	Y	X X X X
OC-SW-ISCO3	11:30	G	Water	Y	X X X X
OC-SW-PZ-16RRSW	11:35	G	Water	Y	X X X X
OC-SW-PZ-17RRSW	11:55	G	Water	Y	X X X X
OC-SW-PZ-18RRSW	12:30	G	Water	Y	X X X X
OC-SW-SD-17	12:05	G	Water	Y	X X X X
OC-DUP			Water	Y	X X X X
			Water		
			Water		
			Water		
Possible Hazard Identification					
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5-16-11	1430	John Burkhardt	5-16-11	C930
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5-16-11	1700	John Burkhardt	5-16-11	1700
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months:		
Cooler Temperature(s) °C and Other Remarks:					
Custody Seals Intact: <input checked="" type="checkbox"/> Custody Seal No.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					